NPL Factsheets for Ohio:

FIELDS BROOK

EPA REGION 5

Ashtabula County
Ashtabula

EPA ID# OHD980614572 - Last 19th Congressional District
Update: February 2002

Site Description

Fields Brook site, located approximately 55 miles east of Cleveland in the city and county of Ashtabula, Ohio, is a six square-mile watershed of a Brook where from 1940 to the present, up to 19 separate facilities operated. Activities range from metals-fabrication to chemicals production. Fields Brook flows into the Ashtabula River, which flows into Lake Erie approximately 1-1/2 miles downstream of the site. Sediments of Fields Brook and soils of the Fields Brook floodplain/wetlands area are contaminated with a wide variety of contaminants including polychlorinated biphenyls (PCBs), chlorinated solvents and metals. Several industrial properties surrounding Fields Brook are potentially recontaminating Fields Brook sediment, which has contaminated Ashtabula River sediments. Approximately 23,000 people live within one mile of the site in the city of Ashtabula.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions..

NPL Listing History: Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants

Sediments taken from the Ashtabula River are contaminated with PCBs, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), heavy metals, and phthalates. VOCs and heavy metals including mercury, lead, zinc, and cadmium have been detected in surface water from Fields Brook and the Detrex tributary. Contaminated sediments threaten drinking water intakes in Lake Erie. Contaminants detected in fish include VOCs and PCBs. The site poses a potential health risk to individuals who accidentally ingest or come into direct contact with contaminated water from Fields Brook and the Ashtabula River. Ingesting contaminated fish or sediments also may cause adverse health effects.

Cleanup Progress

In 1986, a final cleanup decision for the Fields Brook sediment operable unit was reached between the United States Environmental Protection Agency (U.S. EPA) and the state. In 1989, U.S. EPA issued a Unilateral Administrative Order (UAO) to require the potentially responsible parties (PRPs) to design and implement the 1986 Record of Decision (ROD) for the Fields Brook sediment. Recognizing that contaminated sediment was only part of the problem, U.S. EPA required the PRPs to also investigate the adjacent floodplain/wetland area and conduct a search for the source(s) of site contamination.

The investigation of the floodplain/wetland areas along Fields Brook found that contamination, especially PCBs, did extend into the soils adjacent to the Brook. U.S. EPA issued a ROD on June 30, 1997, to select the remedy for the

floodplain/wetlands Operable Unit (OU). The remedy requires the excavation and disposal of PCB-contaminated soil in both industrial and residential portions of the OU. In addition, soils with low-level PCB contamination near residential areas will be covered to reduce erosion into the Brook. An on-site landfill will be built within the industrial area of the Fields Brook watershed to house PCB-contaminated soils and sediment from site.

In August, 1997, U.S. EPA issued an Explanation of Significant Differences (ESD) which modified the original 1986 ROD. The ESD eliminated the need for on-site thermal treatment by allowing off-site treatment of contaminated sediment. The ESD also decreased the volume of sediment requiring excavation and eliminated the solidification requirement for sediments to be landfilled.

On September 30, 1997, U.S. EPA issued a ROD to select remedies for six source areas that could potentially recontaminate the Brook. In general, remedies require excavation and containment.

In 1998, low-level radionuclides were discovered in the soil and mining residuals at the Millennium Inorganic Chemicals $TiCl_4$ facility (one of the industrial source areas addressed by the September 1997 source control ROD) and in Fields Brook sediment and floodplain/wetland soils. The discovery of the low-level radionuclides (primarily radium-226 and radium-228) complicated the cleanup designs that were then underway. On April 8, 1999, the U.S. EPA issued a Site-Wide ESD which modified all existing RODs for the site, established radionuclide cleanup levels, and outlined the design modifications necessitated by the presence of the radionuclides. In August 2001, U.S. EPA issued another ESD to address the discovery of Dense Non-Aqueous Phase Liquid (DNAPL) below the brook sediments and floodplain soils. The DNAPL was found in Exposure Units 6 and 8, and indications are that it originally came from the Detrex discharge. The ESD reverses a previous change in treatment location and allows on-site thermal treatment of impacted soils and sediments.

Cleanup work at the Fields Brook operable units is expected to proceed according to the following schedule:

Millennium Inorganic Chemicals TiCl4 Facility - Excavation of approximately 60,000 cubic yards of PCB- and radium-contaminated soil and mining residuals was completed in the fall of 1999. Disposal in the existing Millennium on-site landfill.

Fields Brook Sediment and Floodplain/Wetland Soils - Construction of an on-site landfill was completed in the summer of 2000. Excavation of Fields Brook soil and floodplain/wetland sediment began in 2001. Remaining DNAPL-contaminated soil and sediment will be removed in Spring 2002. Thermal treatment will be performed on-site.

RMI Metals - The cleanup work was completed in the summer of 2001.

Acme Scrap Iron and Metals / South Sewers - The excavation and disposal of PCB-contaminated soil and the cleaning of the south sewers was completed in the Fall of 2000.

Detrex Inorganic Chemicals- Construction of a slurry wall was completed in 2000. Construction for the initial phase of DNAPL extraction wells began in 2001. The extraction system will be operational in early 2002. After an evaluation of the capture of the extraction wells, a determination will be made whether additional extraction wells are required.

North Sewers - The grouting and replacement of the contaminated North Sewers was completed in Fall of 2000.

Conrail - Physical construction at the Conrail source control OU was completed in December of 1998. Arsenic-contaminated soil was excavated and shipped for disposal off-site.

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